

WHAT IS CLAIMED IS:

1. A hydraulic platform lift for use with a truck or truck trailer, comprising:

a platform member having two opposite side edges;

first and second hydraulic cylinders each having a piston member therein, each of said first and second hydraulic cylinders operatively coupled to a respective side edge of said platform member to permit raising and lowering of said platform member;

pump means for supplying pressurized hydraulic fluid to said hydraulic cylinders via a positive displacement means; and

said positive displacement means comprising a pair of longitudinally-moveable, spaced-apart pistons, each operatively coupled to each other so that movement of one piston causes an equal movement of the other, said pistons situate within a corresponding cylinder member, each cylinder member having a pair of opposite ends, one end of which having an aperture to permit ingress of hydraulic fluid from said pump means, and another aperture at an opposite

end to permit egress of hydraulic fluid from said cylinder member to one of said hydraulic cylinders.

5 2. The hydraulic platform lift as claimed in claim 1, wherein said aperture for each cylinder member which permits the ingress of hydraulic fluid from the pump means for raising of the platform permits egress of fluid from the cylinder member when said platform is desired to be lowered.

10 3. The hydraulic platform lift as claimed in claim 2, said pistons operatively coupled by shaft means, said shaft means extending perpendicularly from each of said pistons from opposite sides thereof.

15 4. The hydraulic platform lift as claimed in claim 3, said shaft means centrally located within each of said cylinder members.

20 5. The hydraulic platform as claimed in claim 2, said pistons operatively coupled to each other by shaft means, said shaft means extending perpendicularly outwardly from opposite sides of one piston of said pair of pistons and from only one side of the other piston of said pair of pistons.

09873243 060501

5 6. The hydraulic platform as claimed in claim 2, said pair of pistons comprising a first and second piston, said first and second pistons each having mutually opposite sides and operatively coupled to each other by shaft means, said shaft means extending perpendicularly outwardly from said opposite sides of the first piston and from only one side of the second said piston, said aperture for ingress of hydraulic fluid from said pump means situate proximate the side of said second piston having no shaft means extending therefrom.

10 7. The hydraulic platform lift as claimed in claim 1, said cylinder members each having mutually opposite opposed ends, wherein said cylinder members each possess piston phasing means proximate one end of each of said pair of cylinder members.

15 8. The hydraulic platform lift as claimed in claim 1, said cylinder members each having mutually opposite opposed ends, wherein said cylinder members each possess piston phasing means proximate each of said mutually opposite ends.

20 9. The hydraulic platform lift as claimed in claim 1, further comprising valve means to restrict flow of hydraulic fluid to thereby prevent uncontrolled descent of said platform.

00873243-060501

10. The hydraulic platform lift as claimed in claim 1, said first and second hydraulic cylinders each having mutually opposite opposed ends, wherein said first and second cylinders each possess piston phasing means proximate a same end thereof.

5 11. The hydraulic platform lift as claimed in claim 10, said first and second cylinders each having a longitudinal axis, wherein said piston phasing means comprises a pair of apertures, spaced apart from each other on said longitudinal axis, with said aperture of said pair of apertures most proximate said end thereof being larger in area than said other of said apertures.

10

12. The hydraulic platform lift as claimed in claim 1, said first and second hydraulic cylinders each having mutually opposite opposed ends, wherein said first and second hydraulic cylinders each possess piston phasing means proximate each of said opposite ends thereof.

15

13. A positive displacement valve for use in a hydraulic circuit, comprising:

a pair of longitudinally-moveable, spaced-apart pistons, each operatively connected by longitudinal shaft means to each other so that movement of one piston causes an equal movement of the other, each situate within a corresponding cylinder member, said cylinder members arranged in juxtaposed

20

relation to each other, each cylinder member having mutually opposite ends and an aperture proximate each of said opposite ends so as to permit ingress and egress of pressurized hydraulic fluid.

- 5 14. The positive displacement valve as claimed in claim 13,

said shaft means extending perpendicularly outwardly from each of said pistons from opposite sides thereof and centrally located within each of said cylinder members.

- 10 15. The positive displacement valve as claimed in claim 13,

said pair of pistons comprising a first and second piston,

said first and second piston each having a pair of opposite sides and operatively coupled to each other by shaft means, said shaft means extending perpendicularly outwardly from said pair of opposite sides of said first piston and from only one side of said second piston.

- 15 20 16. The positive displacement valve as claimed in claim 13,

said aperture for ingress of hydraulic fluid into the cylinder member containing said second piston situate on an end of the cylinder member proximate the side of said second piston not having shaft means extending therefrom.

5

17. The positive displacement valve as claimed in claim 13, said cylinder members each having mutually opposite opposed ends, wherein said cylinder members each possess piston phasing means proximate one end of each of said pair of cylinder members.

10

18. The positive displacement valve as claimed in claim 17, said cylinder members each having a longitudinal axis, wherein said piston phasing means comprises a pair of apertures, spaced apart from each other on said longitudinal axis, with said aperture of said pair of apertures most proximate said one end of said cylinder member being larger in area than said other of said apertures.

15

19. The positive displacement valve as claimed in claim 13, said cylinder members each having a pair of mutually opposite opposed ends, wherein said cylinder members each possess piston phasing means proximate each end of said mutually opposite ends.

20

B,
5 20. The positive displacement valve as claimed in claim 19, said cylinder members each having a longitudinal axis, wherein said piston phasing means comprises a pair of apertures, spaced apart from each other on said longitudinal axis, with said aperture of said pair of apertures most proximate said one end of said cylinder member being larger in area than said other of said pair of apertures.

10 21. A hydraulic platform lift for use with a truck or truck trailer, comprising:

a platform member having two opposite side edges;

first and second hydraulic cylinders each having a piston member therein, each of said first and second hydraulic cylinders operatively coupled to a respective side edge of said platform member to permit raising and lowering of said platform member;

15 pump means for supplying pressurized hydraulic fluid to said hydraulic cylinders via a positive displacement means;

20 said positive displacement means comprising a pair of juxtaposed cylinder members, each containing a longitudinally-moveable piston, such

pistons operatively coupled to each other so that movement of one piston causes an equal movement of the other, each cylinder member having a pair of opposite ends, one end of which having an aperture to permit ingress of hydraulic fluid from said pump means, and another aperture at an opposite end to permit egress of hydraulic fluid from said cylinder member to one of said hydraulic cylinders; and

said positive displacement means adapted, when said pump means provides pressurized hydraulic fluid via a respective aperture to a first side of each of said pistons, to cause said pistons to be displaced an equal distance causing an equal egress of hydraulic fluid from said cylinder members via a respective aperture from a side of each of said pistons opposite said first side and a corresponding equal supply of hydraulic fluid to each of said first and second hydraulic cylinders with resultant equal movement of said piston members therein regardless of different loads which may be applied to said first and second hydraulic cylinders.

09873243-060501